

Dehydrogenation of Alcohols and Cyclohexene on MnO ,
by A. A. Tolstopyatova, A. A. Balandin, 7 pp.

RUSSIAN, per, In Ak Nauk SSSR, Otdel Khim
Nauk, No 5, 1960, pp 767-793.

CB

Sci
May 62

194,670

Investigation of Catalytic Conversions of
Isopropanol and Cyclic Hydrocarbons of Titanium
Dioxide (Anatase) by Means of a Differential
Thermocouple, by A. A. Balandin, A. A.
Tolstopyatova, 6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 12, 1960, pp 2096-2102.

CB

Sci
May 62

194,490

The Formation of Carbon Dendrites in the Decomposition
of Alcohols on Nickel, by A. A. Balandin, A. P.
Rudenko, G. Stegner, 8pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 5, 1961, pp 662-770

CB

Sci.

Mar 62

189,009

Determination of Relative Adsorption Coefficients by
the Isotope Dilution Method, by G. V. Isagulyants,
A. A. Balandin, E. I. Popov, 3 pp.

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXXIX, No 1,
1961, pp 139-141.

CB

190,303

Sci

Apr 62

Reactivity of Halogenobenzenes in Catalytic
Hydrolysis in the Vapor Phase, by I. Kh. Freidlin,
A. A. Balandin, G. A. Fridman.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
1945, pp 655-663.

OTS 61-16888

Sci

Mar 62

Engl Vol VII, No 2

189,552

Catalytic Conversions of Some Alkyl Halides, by
A. A. Balandin, A. I. Kuldina, I. P. Beryshnikova,
6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 7, 1960, pp 1168-1169.

CB

165,862

Sci
Sep 61

Centenary of the Birth of Academician, by H. D.
Zelinskiy, A. A. Balandin, 4 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XXV, No 3, 1961,
pp 481-489.

Cleaver-Hume Press Ltd.

Sci

Feb 62

182,697

Kinetics of the Dehydrogenation of Alcohols on
Copper, by A. A. Balandin, P. Teteni, 6 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XXXV, No 1,
1961, pp 62-71.

Cleaver-Hume Press

Sci

Dec 61

177,927

61-16643

Balandin, A. A., Marushkin, M. N., and
Afanas'ev, M. M.

CONTACT DECOMPOSITION OF HYDROCARBONS:
CONVERSION OF NORMAL-BUTANE UNDER THE
ACTION OF CARBON DIOXIDE OVER NICKEL-
ALUMINA CATALYSTS. [1961] 4p. 25 refs.
Order from OTS or SLA \$1.10 61-16643

Trans. of Acta Physicochimica U. R. S. S., 1942,
v. 17, p. 83-92.

DESCRIPTORS: *Hydrocarbons, *Butanes, Decomposi-
tion, *Carbon dioxide, *Alumina-nickel catalysts,
Catalysis, Chemical reactions.

The conversion of n-butane and carbon dioxide over
nickel-alumina is investigated experimentally. A
scheme of the reaction mechanism is given which ac-
counts for a successive shortening of the carbon chain
and explains the formation of carbon, being in accord-
(Chemistry--Organic, TT, v. 6, no. 10) (over)

I. Balandin, A. A.
II. Marushkin, M. N.
III. Afanas'ev, M. M.
IV. Title: Conversion...

Office of Technical Services

61-18349

Balandin, A. A. and Marukyan, G. M.
PRODUCTION OF α -METHYLSTYRENE BY CATALYTIC
DEHYDROGENATION OF ISOPROPYL-BENZENE.
[1961] 3p. 2 refs.
Order from OTS or SLA \$1.10

61-18349

Trans. of [Akademiya Nauk SSSR]. Comptes Rendus
(Doklady) de l'Academie des Sciences de l'U. R. S. S.,
1945, v. 48, p. 482-483.

DESCRIPTORS: *Styrenes, *Methyl radicals, Synthesis,
*Cumenes, Dehydrogenation, *Chromium compounds,
*Oxides, Catalysts, Catalysis, Propyl radicals,
Benzenes.

Catalytic dehydrogenation of isopropylbenzene to
 α -methylstyrene on catalysts such as promoted chromium
oxide occurs at a higher rate than of ethylbenzene to
styrene under comparable conditions. The yield
(Chemistry--Organic, TT, v. 6, no. 10) (over)

I. Balandin, A. A.
II. Marukyan, G. M.

Office of Technical Services

61-18058

Balandin, A. A.
CATALYTIC DEHYDROGENATION OF HYDROCAR-
BONS AND ITS APPLICATION TO SYNTHESIS OF
RUBBER FROM GASES. [1961] 24p. 90 refs.
Order from OTS or SLA \$2.60 61-18058

Trans. of Akademiya Nauk SSSR. Otdelnie Khimi-
cheskikh Nauk. Izvestiya, 1942, no. 1, p. 21-44.

DESCRIPTORS: *Hydrocarbons, *Synthetic rubber,
*Dehydrogenation, *Catalysts, Benzenes, Butanes,
Butenes, Synthesis, Butadienes, Styrenes, Ethyl
radicals.

The catalytic dehydrogenation of hydrocarbons on
chromic oxide is discussed from the point of view of
the author's multiplet theory and examples of dehy-
drogenation of butane, butene and ethylbenzene given
indicating the significance and the applicability of this
method for commercial synthesis of butadiene and
styrene. (Author)

I. Balandin, A. A.

(Chemistry--Organic,
TT, v. 6, no. 10)
Office of Technical Services

61-16920

Balandin, A. A., Marukyan, G. M., and
Selmovich, R. G.
CATALYTIC DEHYDROGENATION OF p-CYMELE.
[1961] 4p. 15 refs.
Order from OTS or SLA \$1.10 61-16920

Trans. of Akademiya Nauk SSSR. Comptes Rendus
(Doklady) de l'Academie des Sciences de l'U. R. S. S.,
1943, v. 41, p. 71-73.

DESCRIPTORS: *Cymenes, Dehydrogenation,
Catalysis.

Introduction of two methyl groups into the molecule of
ethylbenzene, one attached to the ring and the other
placed in the side chain in α -position, facilitates de-
hydrogenation. (Author)

(Chemistry--Organic, TT, v. 6, no. 7)

I. Balandin, A. A.
II. Marukyan, G. M.
III. Selmovich, R. G.

Office of Technical Services

61-16928

Balandin, A. A. and Marushkin, M. N.
FORMATION OF OLEFINS FROM HIGHER PARAF-
FINS. [1961] 5p. 9 refs.
Order from OTS or SLA \$1.10

61-16928

Trans. of Akademiya Nauk SSSR. Comptes Rendus
(Doklady) de l'Academie des Sciences de l'U.R.S.S.,
1943, v. 40, p. 254-256.

DESCRIPTORS: *Ethylenes, Synthesis, Hydrocarbons,
Decomposition, Waxes, Catalysts.

In a preliminary study catalytic cracking of paraffin
wax in the presence of a mixed chromium catalyst gave
results showing that at 450-500° dehydrogenation to
olefins definitely predominates over other reactions of
paraffin wax hydrocarbons under the conditions used.
(Author)

(Chemistry--Organic, TT, v. 6, no. 7)

I. Balandin, A. A.
II. Marushkin, M. N.

Office of Technical Services

61-18011

Balandin, A. A., Zeilinskii, N. D. and others.
PREPARATION OF 1,3-BUTADIENE BY CATALYTIC
DEHYDROGENATION OF 1-BUTENE. [1961] 9p.

15 refs.

Order from OTS or SLA \$1.10

61-18011

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1941,
v. 14, p. 435-445.

DESCRIPTORS: *Butadienes, Synthesis, *Butenes,
Dehydrogenation, Catalysis.

The catalytic dehydrogenation of 1-butene to 1,3-butadiene was investigated in the presence of carbon dioxide or nitrogen. The conditions were established under which butadiene is formed in yields of up to 34% on the passed, or 77% on the decomposed, butene. The reaction is carried out under atmospheric pressure, at 600°, with a contact period of 0.3 seconds and dilution of butene with carbon dioxide in the ratio of 1:7.5 by

(Chemistry--Organic, TT, v. 6, no. 7)

(over)

I. Balandin, A. A.
II. Zeilinskii, N. D.

Office of Technical Services

Balandin, A. A., Zelinskii, N. D. and others.
CATALYTIC DEHYDROGENATION OF BUTENE TO
BUTADIENE UNDER REDUCED PRESSURE. [1961]
11p. 15 refs. 61-16636
Order from OTS or SLA \$1.60

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1942,
v. 15, p. 128-138.

DESCRIPTORS: *Butadienes, Dehydrogenation,
*Butenes, Chromium catalysts.

Research on dehydrogenation of 1-butene to 1,3-butadiene was continued by employing a pressure of 180 mm and two chromium catalysts. The effect of the contact period and the temperature were systematically investigated. Occurrence of two consecutive reactions was established consisting in formation and decomposition of butadiene. The highest yield of butadiene was obtained at 592° and a rate of flow of 2,000 liters per liter catalyst per hour. This yield amounted to 29% on the (over)
(Chemistry--Organic, TT, v. 6, no. 6)

61-16636

I. Balandin, A. A.
II. Zelinskii, N. D.

Office of Technical Services

61-16919

Balandin, A. A. and Kotelkov, N. Z.
DEHYDROGENATION AND DECOMPOSITION OF
CYCLOHEXANE AT HIGH TEMPERATURES OVER
METALLIC CATALYSTS. [1961] 14p. 19 refs.
Order from OTS or SLA \$1.60 61-16919

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1942,
v. 15, p. 139-150.

DESCRIPTORS: *Cyclohexanes, Dehydrogenation,
Decomposition, Catalysts.

Catalytic dehydrogenation and decomposition of cyclohexane was investigated at 300-600° over electrically heated coils of nichrome, platinized nichrome, palladized nichrome, iron and chromium-plated iron, using a specially constructed apparatus distinguished by a number of advantages over the conventional catalytic equipment. Kinetic data for these reactions were obtained and a hypothesis of dendritic deposition of carbon, based on the multiplet theory of catalysis, is suggested as an explanation of the data obtained. (Author)

I. Balandin, A. A.
II. Kotelkov, N. Z.

Office of Technical Services
(Chemistry--Organic,
TT, v. 6, no. 7)

Kinetics of the Dehydration of Alcohols by Tungsten
Oxide and the Energy of the Carbon, Hydrogen and
Oxygen Bonds with the Catalyst, by A. A. Tolstopyan
A. A. Balandin, V. Stshizhevskiy, 8 pp.

RUSSIAN, per, Kinetika i Kataliz, Vol I, No 4,
1960, pp 558-565.

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172, 766

Sci

Oct 61

The Activity of Cadmium Oxide as a Catalyst for
Hydrocarbon Dehydrogenation, by A. A. Balandin,
V. A. Ferafontov, A. A. Tolstopyatova, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 10, 1960, pp 1751-1758.

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Determination of the Energy of the Bond
of the Reacting Atoms of Organic Mole-
cules with the Surface of MnO Catalysyt,
by A.A. Tolstopyatova, A. A. Balandin,
V. Kh. Mayushenko, 4 pp

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel. Khim
Nauk, No 8, 1960, pp 1333-1336.

CB

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169, 403

Sep 61

AEC-tr-4497(p.59-65) Uncl.

STUDY OF THE MECHANISM OF CONSECUTIVE REACTIONS
OF THE BUTANE-BUTYLENE-DIVINYLL SYSTEM EMPLOYING
RADIOACTIVE CARBON C¹⁴. A. A. Balandin, O. K.
Bogdanova, G. V. Isagulyants, M. B. Neiman,
and E. I. Popov. Translated from Trudy
Vsesoyuz. Nauch.-Tekh. Konf. po Primenen.
Radioaktiv. i Stabil. Izotopov i Izlucheni v
Narod. Khoz. i Nauke, Moscow, 1957 (1958).
Izotopy i Izlucheniya v Khim., p.52-7.

C-4 P NSA

N-7

Kinetic Determination of the Energies of the Bonds
Between the Reacting Atoms of Organic
Molecules and the Surface of Blue Molybdenum Oxide,
by A. A. Tolstopyatova, A. A. Balandin, et al, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 3, 1963, pp 423-428.

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Apr 64

255,069.

Catalytic Dehydrogenation of Ethylbenzene to Styrene
on Cadmium Oxide in the Presence of Water Vapor,
by V. A. Ferasontov, A. A. Balandin, et al, 8 pp.

RUSSIAN; per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 3, 1963, pp 414-422.

CB

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Apr 64

255,063

Selective Hydrogenation of Butynediol into
Butenediol on a Nickel Skeleton Catalyst,
by L. Kh. Freidlin, A. A. Balandin, I. F.
Shukova, 8 pp.

RUSSIAN, per, Kinetika i Kataliz, Vol I,
No 3, 1960, pp 447-454.

CB

168, 53-3

Sci
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Catalytic decomposition of dibutyl sulphide
on α -Iron, by A. A. Balandin, A. I. Kukina,
Ye. A. Malakhova, 6 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XXXIV, No 9,
1960, pp 2030-2040.

Cleaver-Hume Press

ATS- RJ-3244

Sci
Aug 61

167,073

Method for Preparation of 2-Isopropylanthraquinone,
by A. A. Balandin, L. Kh. Freidlin, V. S. Rozina,
etc 1, 3 pp.

RUSSIAN, per, Zhur Prii Khim, Vol XXXIII, No 8,
1960, pp 1893-1896.

CB

SE1
Jul 61

161, 110

Kinetics of the Catalytic Reduction of Peroxides and Hydroperoxides, III. Hydrogenation of 3-Methyl-1-butyne-3-Hydroperoxide and p-Nitrobenzoyl Peroxide, by A. A. Balandin, L. Kh. Freidlin, N. V. Nikiforova, 6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 7, 1959, pp 1177-1185.

CB

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162,430

Adsorption and Catalysis. III. Stepwise
Hydrogenation of Cyclopentadiene, by
A. A. Balandin, M. L. Khidkekel' and V. V.
~~Khidkekel~~ Petrikeyev, 8 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel. Khim Nauk,
No 7, 1959, pp 1169-1176.

CB

Sci

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162,429

Effect of the Treatment of Chromic Oxide With
Hydrogen and Oxygen on Its Catalytic Activity
in Dehydrogenation and Dehydration Reactions,
by A. A. Tolstopyatova, A. A. Balandin, K. A.
Dulitskaya, 8 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 10, 1959, pp 1716-1724.

CB

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Jun 61

Adsorption and Catalysis. Communication 2.
Reaction Rate, Surface Potential, and Adsorption
Relationships in Hydrogenation, by A. A. Balandin,
M. L. Khidekel', V. V. Patrikeyev, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 6, 1959, pp 999-1004.

CE

Sci
Jun 61

157, 901

The Structure of Molecules and Reactivity in Catalysis
by A. A. Balandin, 10 pp.

RUSSIAN, per, Kinetika i Kataliz, Vol I, No 1,
1960, pp 5-14.

CB

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Jul 61

158, 147

Effect of the Nature of Metals on Their
Catalytic Activity, by A. A. Balandin,
P. Totend, 5 pp.

PCR,
RUSSIAN, *Doklady Akad. Nauk SSSR*, Vol CXXVII,
No 3, 1960, pp 577-580. 9077078

MTS

Sci. & Chem
Jun 61

154815

Development of a Unified Theory of Catalysis.
Structural and Energetic Factors* by
A. A. Palasadin, 14 pp.

RUSSIAN, per, Khim Nauka i Prom, Vol. IV, No 5,
1959, pp 655-661. 9077080

ATB
RJ 2527

Sci - Chem
Jun 61

154814

"Radioactive Catalysts" Dehydration of Cyclo-
hexanol on Magnesium and Sodium Sulfates, by
A. A. Balandin, V. I. Spitsyn, N. P.
Dobroselskaya, I. E. Mikhailenko, 8 pp.

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXI, 1958,
pp 495-498.

AEC Tr-4520

Sci
Jun 61

155,949

Selective Hydrogenation of Adiponitrile Over a Cobalt
Boride Catalyst, by B. D. Polkovnikov, L. Kh. Freidlin,
A. A. Balandin, 3 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 8,
1959, pp 1488-1489.

CB

Sci -
May 61

152,777

Catalytic Properties of Rhodium. Communication 2.
Dehydrogenation of Cyclohexane, by A. A. Balandin,
E. L. Karpeiskaya, A. A. Tolstopyatova, 6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 9,
1959, pp 1529-1535.

CB

Sci -
May 61

152,790

61-20144

Balandin, A. F., Bogdanova, O. K. and others.
CATALYTIC DEHYDROGENATION OF THE TECHNICAL BUTANE-BUTENE FRACTION OF CRACKED GAS. [1961] 4p. 3 refs.
Order from OTS or SLA \$1.10 61-20144

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1945, v. 18, p. 609-611.

DESCRIPTORS: *Butanes, *Butenes, Dehydrogenation, Catalysts, Catalysis, *Butadienes, Synthesis, *Hydrocarbons, Gases.

On the example of catalytic dehydrogenation of a plant-produced butane-butene fraction of cracking gases it was shown that the method of preparation of butadiene (by dehydrogenation of pure butane and 1-butene) previously described by the authors is totally applicable to gases from oil cracking. (Author)
(Chemistry--Organic, TT, v. 6, no. 11)

I. Balandin, A. A.
II. Bogdanova, O. K.

Office of Technical Services

Balandin, A. A., Bogdanova, O. K., and
Shcheglova, A. P.
THE KINETICS OF DEHYDROGENATION OF
BUTYLENE ON A CHROMIUM CATALYST. [1961]
21p.
Order from ATS \$29.95 ATS-00N54R

Trans. of Akad[emiya] Nauk SSSR, Otdel[enie]
Khim[icheskikh] Nauk. Izvest[iya] 1946, no. 5,
p. 497-513.

DESCRIPTORS: *Butenes, *Dehydrogenation, *Chrom-
ium catalysts, Catalysts.

(Chemistry--Organic, TT, v. 6, no. 11)

61-25549

I. Balandin, A. A.
II. Bogdanova, O. K.
III. Shcheglova, A. P.
IV. ATS-00N54R
V. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

61-20159

Balandin, A. A. and Marukyan, G. M.
CATALYTIC PREPARATION OF α -METHYL-
STYRENE. [1961] 10p. 12 refs.
Order from OTS or SLA \$1.10

61-20159

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1946,
v. 19, p. 207-216.

DESCRIPTORS: *Styrenes, Methyl radicals,
Synthesis, *Cumenes, Dehydrogenation, Copper,
Chromium, Catalysts, Catalysis.

A study of catalytic dehydrogenation of isopropylben-
zene to α -methylstyrene showed that this method may
be recommended for testing on a commercial scale.
 α -Methylstyrene is distinguished by a number of ad-
vantages over styrene. Its preparation is simpler and
the quality of synthetic rubber obtainable by its copoly-
merization with 1,3-butadiene is apparently higher
than that of copolymers of the latter with styrene. De-
(Chemistry--Organic, TT, v. 6, no. 11) (over)

I. Balandin, A. A.
II. Marukyan, G. M.

Office of Technical Services

Effect of the Structure of an Alcohol Molecule on the
Kinetics of Its Dehydrogenation. Communication 4.
Catalytic Dehydrogenation of Benzyl Alcohol, by O. K.
Bogdanova, A. A. Balandin, A. P. Shcheglova, 6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 8,
1959, pp 1372-1377.

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May 61

152, 757

Catalytic Properties of Rhenium. Communication 1.
Rhenium as a Dehydrogenation Catalyst, by A. A. Belandina
B. I. Karpeiskaya, A. A. Tolstopyatova, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 8,
1959, pp 1365-1371.

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Sol.
May 61

152,755

Mechanism of Carbon Formation in the Decomposition of
Ethanol Over a Copper-Silica Gel Catalyst, by G.
Steguer, A. A. Balandin, A. P. Rudenko, 8 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 11,
1959, pp 1896-1904.

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May 61

153,051

Kinetics of the Vapor Phase Transformation of
Piperidine Over a Nickel Catalyst, by A. A. Balandin,
L. I. Sovalova, T. A. Slovokhotova, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 11
1959, pp 1882-1888.

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153, 048

Some Catalytic Properties of Molybdenum Trioxide
and Dioxide, by A. A. Balandin, I. D. Rozhdentvenskaya
6 pp.

RUSSIAN, pr, Iz Ak Nauk SSSR, Sbornik Khim Nauk, No 11,
1959, pp 1889-1895.

CB

153,050

Selectivity of Catalysts. Communication 3. Hydro-
genation of Isoprene Over Raney Nickel. by L. Kh.
Freidlin, A. A. Balanin, I. F. Zhukova, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 9,
1959, pp 1640-1645.

CB

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152,806

The Relation Between Activation Energy and Relative
Adsorption Coefficient, by A. B. Agronchov, A. A.
Bilandin, Yu. S. Kardachev, 4 pp.

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXXI, No 5,
1960, pp 1120-1122.

CB

148,957

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Syntheses of Aliphatic Aromatic Silanes and Their
Dehydrogenation, by A. A. Balandin, A. D. Petrov,
G. M. Marukyan, 5 pp.

RUSSIAN, per Zhur Obshch, Vol XXX, No 1, 1960,
pp 87-90.

CB

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Feb 61

144,094

Catalytic Dehydrogenation of 2-Ethylthiophene,
by A. A. Balandin, G. M. Marukyan, R. G. Seimovich,
4 pp.

RUSSIAN, per, ~~Zhur~~ Zhur Obshch, Vol. XXX, No 1, 1950,
pp 321-323.

CB

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Feb 61

144,146

The Mechanism of Carbon Formation During Dehydration
of Isopropyl Alcohol Over Copper -- Silica Gel Catalyst,
A. A. Belandina, A. B. Endosha, G. Stogin, & ap.

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXIX, No 3,
1959, pp 565-568.

CB

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Oct 60

129,951

1. Effect of Molecular Structure on Dehydrogenation Kinetics in the Case of C_2 and C_5-C_9 Alcohols, 5pp.

1. Effect of Molecular Structure on Dehydrogenation Kinetics in the Case of C_4 and C_9 Alcohols, by O. K. Bogdanova, A. P. Shcheglova, A. A. Balandin, 4 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk, No 2, 1960, pp 322-326; 327-330.

CB

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144, 304

Mar 61

Mean Bond Energies and their Application in the
Calculation of the Heights of Energy Barriers of
Catalytic Reactions, by G. I. Levi, A. A. Balandin,
5 pp

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Khim Nauk,
No 2, 1960, pp 157-162

CB

145,370

Sci
Apr 61

Kinetics of Butene Dehydrogenation, by O. K.
Bogdanova, A. P. Shcheglova, A. A. Balaandin,
6 pp.

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXIX, No 6,
1999, pp 1293-1298.

6

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Sci
Oct 60

129,977

Adsorption of Lower Aliphatic Alcohols on Alumina
Catalysts and Orientation of the Adsorbed Molecules,
by V. E. Vasserberg, A. A. Balandin, M. P. Maksimova,
5 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XXXV, No 4, 1961,
pp 858-866.

Claver-Hume Press

Sci

Feb 62

184, 795

Effect of Surface Reduction of Chromium Oxide on Its
Catalytic Properties, by A. A. Balandin, I. D.
Rozhddestvenskaya, 5 pp.

RUSSIAN, per, Zhur Fiz Khim, No 6, 1960, pp 1336-1344.

Cleaver-Rune Press

Sci

Apr 61

144, 494

Kinetics of the Dehydrogenation of Isopentenes, by
A. P. Shcheglova, A. A. Balandin, O. K. Bogdanova,
4 pp

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXIX, No 5,
1959, pp 1071-7

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Sci
Oct 60

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